

What is claimed is:

--1. A data delivery system, comprising:
a trans-modulator for converting Internet data
modulated using a first modulation protocol to Internet
5 data modulated using a second modulation protocol; and
a modem for receiving the Internet data modulated
using the second modulation protocol via a transmission
link.

10 --2. The data delivery system as set forth in claim
1, wherein
the trans-modulator is located at a wireless head
end or a terrestrial head end.

15 --3. The data delivery system as set forth in claim
2, wherein
the terrestrial head end includes a cable television
head end, a private cable operator head end, a multiple
dwelling unit head end or a single master antenna
20 television system head end.

--4. The data delivery system as set forth in claim
2, wherein the
wireless head end is a very high frequency head end,
25 an ultra high frequency head end, a multipoint, multi-

channel distribution system head end or a low power microwave distribution system head end.

--5. The data delivery system as set forth in claim
5 1, wherein

the first modulation protocol is quadrature phase shift keying modulation.

--6. The data delivery system as set forth in claim
10 1, wherein

the first modulation protocol is eight phase shift keying modulation.

--7. The data delivery system as set forth in claim
15 1, wherein

the second modulation protocol is quadrature amplitude modulation.

--8. The data delivery system as set forth in claim
20 1, wherein

the second modulation protocol is coded orthogonal frequency division multiplexing.

--9. A data delivery system, comprising:
25 a modulator for modulating Internet data using a first modulation protocol;

a trans-modulator coupled to the modulator via a wireless transmission link for converting the Internet data modulated using the first modulation protocol to Internet data modulated using a second modulation
5 protocol, the trans-modulator being located at a head end; and

a modem for receiving the Internet data modulated using the second modulation protocol via a transmission link.

10

--10. The system as set forth in claim 9, wherein the wireless transmission link is a satellite transmission link.

15

--11. The system as set forth in claim 9, wherein the head end is a wireless head end or terrestrial head end.

20

--12. The system as set forth in claim 9, wherein the terrestrial head end includes a cable television head end, a private cable operator head end, a multiple dwelling unit head end or a single master antenna television system head end.

25

--13. The data delivery system as set forth in claim 9, wherein

F017550

the wireless head end is a very high frequency head end, an ultra high frequency head end, a multipoint, multi-channel distribution system head end or a low power microwave distribution system head end.

5

--14. The system as set forth in claim 9, wherein the modem is a quadrature amplitude modulation modem.

10 --15. The system as set forth in claim 9, wherein the first modulation protocol is quadrature phase shift keying modulation.

15 --16. The system as set forth in claim 9, wherein the first modulation protocol is eight quadrature phase shift keying modulation.

20 --17. The system as set forth in claim 9, wherein the second modulation protocol is quadrature amplitude modulation.

--18. A data delivery system, comprising:
a first modem for transmitting a data request via the Internet;
25 at least one server in the Internet for retrieving data responsive to the data request;

PCT/US2008/035560

an encapsulator for receiving the responsive data from the Internet and for generating encapsulated data;

 a modulator coupled to the encapsulator for receiving the encapsulated data and for generating

5 modulated data using a first modulation protocol;

 a wireless transmitter for transmitting the modulated data via a wireless transmission link;

 an antenna for receiving the modulated data transmitted via the wireless transmission link;

10 a trans-modulator coupled to the antenna for converting the modulated data to data modulated using a second modulation protocol; and

 a second modem coupled to the trans-modulator for receiving data modulated using the second modulation

15 protocol via a transmission link.

--19. The data delivery system as set forth in claim
18, wherein

 a computer coupled to the first modem is assigned an
20 IP source address associated with the encapsulator before transmitting the data request so that the data responsive to the data request is transmitted to the encapsulator.

--20. The data delivery system as set forth in claim
25 18, wherein

DRAFTS - OUTSTANDING

the first modem is a quadrature amplitude modulation
modem.

--21. The data delivery system as set forth in claim
5 18, wherein
the second modem is an analog dial up modem.

--22. The data delivery system as set forth in claim
18, wherein

10 the first modulation protocol is quadrature phase
shift keying modulation.

--23. The data delivery system as set forth in claim
18, wherein

15 the first modulation protocol is eight quadrature
phase shift keying modulation.

--24. The data delivery system as set forth in claim
18, wherein

20 the second modulation protocol is quadrature
amplitude modulation.

--25. A data delivery method, comprising:
modulating Internet data using a first modulation
25 protocol;

F07500-0015850

transmitting the Internet data modulated using the
first modulation protocol via a wireless transmission
link to a head end;
5 converting at the head end the Internet data
modulated using the first modulation protocol into
Internet data modulated using a second modulation
protocol; and
10 transmitting the Internet data modulated using the
second modulation protocol via a transmission link to a
modem.

--26. The data delivery method as set forth in claim
25, wherein
15 the first modulation protocol is quadrature phase
shift keying modulation.

--27. The data delivery system as set forth in claim
25, wherein
20 the first modulation protocol is eight quadrature
phase shift keying modulation.

--28. The data delivery method as set forth in claim
25, wherein
25 the second modulation protocol is quadrature
amplitude modulation.

--28. A method for routing Internet response data in
an asynchronous data transmission system, comprising:

authenticating a device of an end-user;
forwarding an IP source address associated with a
5 transmission facility to the end-user device upon
authentication; and
receiving the Internet response data responsive to a
data request of the end-user at the transmission
facility.

10

--29. The method for routing Internet response data
as set forth in claim 28, further comprising:

modulating the Internet response data in order to
transmit the Internet response data over a wireless
15 transmission link.

20
--30. The method for routing Internet response data
as set forth in claim 28, wherein
the transmission facility is a satellite uplink
facility.

25
--31. The method for routing Internet response data
as set forth in claim 29, wherein
the wireless transmission link is a satellite
transmission link.

--32. The method for routing Internet response data as set forth in claim 28, further comprising:

modulating the Internet response data using a first modulation protocol;

5 converting the Internet response data modulated using the first modulation protocol into Internet response data modulated using a second modulation protocol; and

transmitting the Internet response data modulated
10 using the second modulation protocol to an end-user via a transmission link.